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interdiffusion of the outer layer and the substrate, wherein
the outer layer comprises platinum, aluminum, no more than about 2
weight percent hafnium, elements diffused into the protective coating from the
substrate, and substantially no added silicon, and wherein
the outer layer is substantially a single phase.

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4. (Amended) The article of claim 1, wherein the protective coating has an
average hafnium composition profile comprising
a relatively small first concentration of hafnium in a first depth range adjacent
to the protective-coating outer surface,
a relatively large second concentration of hafnium, but not exceeding about 9
weight percent, in a second depth range at greater depths than the first depth range
below the protective-coating outer surface, and
a relatively small third concentration of hafnium in a third depth range at yet
greater depths than the second depth range below the protective-coating outer surface.

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9. (Amended) An article protected by a protective coating, comprising:
a substrate having a substrate surface; and
a protective coating comprising an outer layer deposited upon the substrate
surface and having a protective-coating outer surface, and a diffusion zone formed by
interdiffusion of the outer layer and the substrate, wherein
the outer layer comprises platinum, aluminum, hafnium, elements
diffused into the protective coating from the substrate, and substantially no added
silicon, and wherein the protective coating has an average hafnium composition profile
comprising
from about 0.1 to about 0.5 weight percent hafnium averaged over
locations from the protective-coating outer surface to a depth of about 5 micrometers
below the protective-coating outer surface, and
from about 1 to about 9 weight percent hafnium averaged over
locations from about 10 micrometers below the protective-coating outer surface to

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about 50 micrometers below the protective-coating outer surface, and wherein
the outer layer is substantially a single phase.
